

### **Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

#### **Listing of Claims:**

1.     **(Currently Amended)**         A device for determining the coagulation state of a sample comprising:

        a chamber defining a volume for receiving a sample to be analysed;

        at least one particle disposed within ~~[[said]]~~ the chamber volume wherein ~~[[said]]~~ the at least one particle comprises at least one material which experiences a force when placed in a magnetic field;

        a means for applying a magnetic field to at least part of the chamber volume; and

        at least one magnetic field sensor operative to detect the time-dependent movement ~~and/or position~~ of the at least one particle;

        and a ~~means~~ processor configured to determine the coagulation state of the sample based on the time-dependent movement of the at least one particle ~~for correlating the movement and/or position of said particle to the coagulation state of said sample.~~

2.     **(Currently Amended)**         The device of claim 1, wherein ~~[[said]]~~ the device further comprises a display.

3.     **(Currently Amended)**         The device of claim 1, wherein ~~[[said]]~~ the device displays a value that ~~may be~~ is correlated with a disturbance of hemostasis.

4.     **(Currently Amended)**         The device of claim 1, wherein ~~[[said]]~~ the device displays a clotting time and/or an INR value.

5.     **(Currently Amended)**         The device of claim 1, wherein ~~[[said]]~~ the sample ~~may be~~ is blood or plasma.

6.     **(Previously Presented)**       The device of claim 1, further comprising a filling chamber.

7. **(Previously Presented)** The device of claim 6, further comprising a filling device for filling the chamber
8. **(Currently Amended)** The device of claim 7, where [[said]] the filling device comprises a capillary.
9. **(Currently Amended)** The device of claim 1, wherein [[said]] the material which experiences a force when placed in a magnetic field ~~may be~~ is ferromagnetic, paramagnetic, or superparamagnetic.
10. **(Currently Amended)** The device of claim 1, where [[said]] the at least one particle is generally spherical.
11. **(Currently Amended)** The device of claim 1, where [[said]] the at least one particle has a size in the range of about 2 to about 500µm.
12. **(Currently Amended)** The device of claim 11, wherein [[said]] the at least one particle has a size in the range of about 2 to about 20µm in at least one direction.
13. **(Currently Amended)** The device of claim 1, wherein [[said]] the at least one particle ~~may~~ comprises two or more different materials and wherein at least one material experiences a force when exposed to a magnetic field.
14. **(Currently Amended)** The device of claim 1, wherein more than one particle is disposed in [[said]] the chamber volume.
15. **(Currently Amended)** The device of claim 1, wherein [[said]] the magnetic field[[s]] is between about 1 and about 100 mT.
16. **(Currently Amended)** The device of claim 15, wherein [[said]] the magnetic field is between about 10 and about 50 mT.
17. **(Currently Amended)** The device of claim 16, wherein [[said]] the magnetic field is between about 10 to about 20 mT.
18. **(Currently Amended)** The device of claim 1, wherein [[said]] the device further comprises at least one reagent disposed within [[a]] the chamber prior to introduction of a sample into [[said]] the device.

19. **(Currently Amended)** The device of claim 18, wherein ~~[[said]]~~ the reagent is selected from the group consisting of: clotting agents, anti-clotting agents, and reagents suitable for measurement of a disturbance of hemostasis.

20. **(Currently Amended)** The device of claim 1, wherein ~~[[said]]~~ the means for providing a magnetic field comprises two spaced apart electromagnets.

21. **(Currently Amended)** The device of claim 20, wherein each ~~[[said]]~~ electromagnet~~[[s]]~~ produces a constant field and ~~[[are]]~~is activated alternatively with a direct current ~~to produce a constant field.~~

22. **(Currently Amended)** The device of claim 1, wherein ~~[[said]]~~ the magnetic field sensor is a Hall Effect sensor.

23. **(Currently Amended)** The device of claim 1, wherein ~~[[said]]~~ the device further comprises circuitry for measuring the time elapsed from introduction of a sample until a change in coagulation state is detected.

24. **(Currently Amended)** The device of claim 1, wherein ~~[[said]]~~ the device further comprises a control means.

25. **(Currently Amended)** A device for determining the coagulation time of a sample, the device comprising:

~~a container defining~~ a chamber defining a volume for holding a quantity of said sample, wherein the chamber holds at least one particle;

a magnetic device co-operating with ~~said container~~the chamber;

a magnetic field which causes the at least one particle to migrate to and fro within the chamber through said sample; and

a magnetic field sensor to detect the time-dependent movement ~~and/or position~~ of the at least one particle.

26. **(Currently Amended)** The device of claim 25, wherein ~~[[said]]~~ the chamber has a volume of less than about 25 $\mu$ l.

27. **(Currently Amended)** The device of claim 26, wherein ~~[[said]]~~ the chamber has a volume less than about 5 $\mu$ l.

28. **(Currently Amended)** The device of claim 25, wherein ~~[[said]]~~ the device further comprises a means for heating the chamber.

29. **(Currently Amended)** The device of claim 25, wherein ~~[[said]]~~ the chamber is formed in a disposable support strip which is removable from the device.

30. **(Currently Amended)** A method of determining the coagulation state of a sample comprising:

providing a sample containing at least one particle comprising a material which experiences a force when placed in a magnetic field;

applying a magnetic field to said sample; and

using a magnetic field sensor to detect the time-dependent movement ~~and/or position~~ of the at least one particle to determine the coagulation state of the sample.

31. **(Currently Amended)** A method of determining the coagulation time of a sample comprising:

causing particles comprised of material which experiences a force when placed in a magnetic field to move through said sample;

using a magnetic field sensor to detect the time-dependent movement ~~and/or position~~ of the particles; and

noting that said coagulation time is the instant at which changes in the properties of said sample reduce the movement.

32. **(New)** A device for determining the coagulation state of a sample comprising:

a chamber defining a volume for receiving a sample to be analysed;

at least one particle disposed within the chamber volume wherein the at least one particle comprises at least one material which experiences a force when placed in a magnetic field and wherein the ratio of the chamber volume to the particle volume is about 30 or greater;

a means for applying a magnetic field to at least part of the chamber volume; and

at least one magnetic field sensor operative to detect the movement of the at least one particle;

and a processor configured to determine the coagulation state of the sample based on the movement of the at least one particle.

33. (New) A device for determining the coagulation state of a sample comprising:

a chamber defining a volume for receiving a sample to be analysed;

at least one particle disposed within the chamber volume wherein the at least one particle comprises at least one material which experiences a force when placed in a magnetic field and wherein the ratio of the chamber volume to the particle volume is about 30 or greater;

a means for applying a magnetic field to at least part of the chamber volume; and

at least one magnetic field sensor operative to detect the time-dependent movement of the at least one particle;

and a processor configured to determine the coagulation state of the sample based on the time-dependent movement of the at least one particle.

34. (New) A device for determining the coagulation time of a sample, the device comprising:

a chamber defining a volume for holding a quantity of said sample, wherein the chamber holds at least one particle;

at least one magnetic field generator configured to generate a magnetic field which causes the at least one particle to migrate to and fro within the chamber through said sample;

a magnetic field sensor to detect the time-dependent movement of the at least one particle; and

and a processor configured to determine the coagulation time of the sample based on the time-dependent movement of the at least one particle.

35. (New) A device for determining the coagulation time of a sample, the device comprising:

a chamber defining a volume for holding a quantity of said sample, wherein the chamber holds at least one particle and wherein the ratio of the chamber volume to the particle volume is about 30 or greater;

at least one magnetic field generator configured to generate a magnetic field which causes the at least one particle to migrate to and fro within the chamber through said sample;

a magnetic field sensor to detect the movement of the at least one particle; and

and a processor configured to determine the coagulation time of the sample based on the movement of the at least one particle.

36. (New) A device for determining the coagulation time of a sample, the device comprising:

a chamber defining a volume for holding a quantity of said sample, wherein the chamber holds at least one particle and wherein the ratio of the chamber volume to the particle volume is about 30 or greater;

at least one magnetic field generator configured to generate a magnetic field which causes the at least one particle to migrate to and fro within the chamber through said sample;

a magnetic field sensor to detect the time-dependent movement of the at least one particle; and

and a processor configured to determine the coagulation time of the sample based on the time-dependent movement of the at least one particle.

37. (New) A method of determining the coagulation time of a blood-derived sample comprising:

subjecting a mixture to a magnetic field, the mixture comprising the blood-derived sample and at least one particle comprised of material which experiences a force when placed in a magnetic field;

magnetically detecting the time-dependent movement of the at least one particle; and

determining the coagulation time based upon the magnetically detected time-dependent movement as detected at multiple times.

38. (New) The method of claim 37, wherein the magnetic field is an oscillating magnetic field.

39. (New) A method of determining the coagulation time of a blood-derived sample comprising:

subjecting a mixture to a magnetic field, the mixture comprising the blood-derived sample and at least one particle comprised of material which experiences a force when placed in a magnetic field;

magnetically detecting the time-dependent movement of the at least one particle; and

determining the coagulation time of the blood-derived sample based upon magnetically detecting reduced time-dependent movement of the at least one particle.

40. (New) The method of claim 39, wherein the magnetic field is an oscillating magnetic field.